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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,611	04/15/2004	Feng Ouyang	60707-1730	7525

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EXAMINER	
KANGARLOO, RAMTIN	
ART UNIT	PAPER NUMBER
2419	
MAIL DATE	DELIVERY MODE
11/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/824,611	OUYANG ET AL.	
	Examiner	Art Unit	
	RAMTIN KANGARLOO	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *2,3,7,9-11,14,17 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-6, 8, 12, 13, 15, 16, 18, 19, and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/28/2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,4-6, 12, 13,15,16, 18, 19 and 21 rejected under 35 U.S.C. 102(e) as being anticipated by Barlev et. al. (US patent No. 7133441).

Regarding **claim 1 and 16,** Barlev discloses a method for dynamic bin allocation, the method comprising:

obtaining link performance data based on a plurality of test transmissions (See col.18, lines 26-28) between two network elements (fig.4, 182 and 184), wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, (See col.4, lines 58- 63) and a full-duplex transmission (See col.26, lines 9-13, full duplex) wherein the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system (see col. 25, lines 3-4, using DMT channel) and each performed at a maximum transmission power (See col.26, lines 21-24 and fig.13, 454 and 456);

determining a desired transmission scheme for the discrete multi-tone communications system (See col.25, lines 3-4 and col.26, lines 35-40 using DMT) , wherein each channel of the discrete multi-tone communications system is designated a transmission mode based on the link performance data_ wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio (See col. 47, lines 14-19) and the transmission mode is selected from an upstream mode, a downstream mode (See col.4, lines 58- 63), and a full-duplex mode(See col.26, lines 9-13, full duplex) ; and

assigning the desired transmission scheme to a connection between the two network elements (assign transmission between 182 and 184 in fig. 4) in the discrete multi-tone communications system (See col.25, lines 3-4).

Regarding **Claim 4, 15, 18 and 21,** Barlev discloses the system according to claim13, 16 and 19 wherein the link performance data are obtained for each of a

plurality of predetermined transmission schemes (See col. 47, lines 14-19); and the desired transmission scheme is selected from the plurality of predetermined transmission schemes based on the link performance data (See col. 17, lines 18-25 and col. 7, lines 37-40).

Regarding **Claim 5,** the method according to claim 4, wherein the test transmissions are based on the plurality of predetermined transmission schemes (See col. 6, Line 68 and col.7, lines 1-4).

Regarding **Claim 6,** the method according to claim 1 further comprising communicating the desired transmission scheme to at least one of the two network elements (fig.4, 182 and 184), and continue communications between the two network elements based on the desired transmission scheme (See col.23, lines 30-35 and col.5, lines 38-42) .

Regarding **claim 12,** Barlev discloses the method according to claim 1, wherein the connection further comprises a digital subscriber line (DSL) (See col.5, lines 58-60).

Regarding **claim 13,** Barlev discloses a system for dynamic bin allocation, the system comprising a first network element and a second network element (fig.4, 182 and 184), wherein each of the first network element and the second network element comprises at least a processor module (fig.5, 198 and 218) and a transceiver module

(See col.23, lines 30-34) that are coordinated to obtain link performance data based on a plurality of test transmissions (See col.18, lines 26-28, plurality of test transmission) between the first network element and the second network element (fig.4, 182 and 184), wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission (See col.4, lines 58- 63), and a full-duplex transmission (See col.26, lines 9-13, full duplex), the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system(see col. 25, lines 3-4, using DMT channel) and each performed at a maximum transmission power (See col.26, lines 21-24 and fig.13, 454 and 456);

determine a desired transmission scheme for the discrete multi-tone communications system(See col.25, lines 3-4 and col.26, lines 35-40 using DMT), wherein each channel of the discrete multi-tone communications system of the plurality is designated a transmission mode based on the link performance data wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio (See col. 47, lines 14-19) and the transmission mode is selected from an upstream mode, a downstream mode(See col.4, lines 58- 63), and a full-duplex mode (See col.26, lines 9-13, full duplex); and

assign the desired transmission scheme to a connection between the two network elements (assign transmission between 182 and 184 in fig. 4) in the discrete multi-tone communications system(See col.25, lines 3-4).

Regarding **claim 19,** Barlev discloses a computer readable medium having code for causing a processor (fig.5, 198 and 218) to perform dynamic bin allocation, the computer readable medium comprising:

code adapted to obtain link performance data based on a plurality of test transmissions (See col.18, lines 26-28) between the first network element and the second network element (fig.4, 182 and 184), wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission (See col.4, lines 58-63), and a full-duplex transmission (See col.26, lines 9-13, full duplex), the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system (see col. 25, lines 3-4, using DMT channel)and each performed at a maximum transmission power (See col.26, lines 21-24 and fig.13, 454 and 456);

code adapted to determine a desired transmission scheme for the discrete multi-tone communications system (See col.25, lines 3-4 and col.26, lines 35-40 using DMT), wherein each channel of the discrete multi-tone communications system is designated a transmission mode based on the link performance data_ wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio (See col. 47, lines 14-19) and the transmission mode is selected from an upstream mode, a downstream mode(See col.4, lines 58- 63), and a full-duplex mode (See col.26, lines 9-13, full duplex); and

code adapted to assign the desired transmission scheme to a connection between the two network elements (assign transmission between 182 and 184 in fig. 4) in the

discrete multi-tone communications system (See col.25, lines 3-4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barlev et al. (US patent No. 7133441) in view of Nelson et al. (US Patent No. 6263048).

Regarding **Claim 8,** Barlev disclose all of the limitation as applied to claim 1. Barlev does not explicitly disclose orthogonal frequency division multiplexing.However Nelson discloses the plurality of frequency ranges are defined based on an orthogonal frequency division multiplexing (OFDM) technology (See col. 6, Lines 37-41 and Col.7 Lines 34-38).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount OFDM taught by Nelson on to the network elements in Barlev to perform communication in order to disassemble a high speed data stream into a plurality of parallel data channel.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMTIN KANGARLOO whose telephone number is (571)270-3452. The examiner can normally be reached on Mon to Fri 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571) 272- 3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RAMTIN KANGARLOO/
Examiner, Art Unit 2419
October 28, 2008

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419